



# EFFECTIVENESS OF THINK-PAIR-SHARE STRATEGY ON ACHIEVEMENT IN SOCIAL SCIENCE AT SECONDARY LEVEL

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## ABSTRACT

Thinking is an internal mental process that uses information as inputs, integrates that information in to previous learned materials and the result may be knowledge or may be nothing (Arjun, 2014). Realization of all the above facts necessitates the emergence of a new method which gives more important to independent thinking, so the present study focuses on the “EFFECTIVENESS OF THINK-PAIR-SHARE STRATEGY ON ACHIEVEMENT IN SOCIAL SCIENCE AT SECONDARY LEVEL”. The hypotheses formulated for the present study are: 1) There is no significant difference between the pretest scores of the experimental group and the control group 2) There is no significant difference between the pretest and posttest scores of experimental group 3) There is no significant difference between the pretest and posttest scores of the control group 4) There is no significant difference between the posttest scores of the experimental group and the control group 5) There is no significant difference between think-pair-share strategy with existing method. The sample consists of 60 students 30 students are considered as experimental group and 30 students are considered as control group. Statistical techniques used: t test and ANCOVA. The result indicated that there was significant difference between pretest and posttest achievement scores of the experimental group and control group. It was found that teaching based on think-pair-share strategy is an effective method for teaching social science.

**KEY WORDS:** THINK, PAIR, SHARE.

## INTRODUCTION:

Think-pair-share (TPS) is a cooperative & collaborative learning strategy and was introduced by Frank, T. Lyman, (1981). In this strategy students work together to solve a problem or answer a question about an assigned reading. This technique requires students to (1) think individually about a topic or answer a question; and (2) share ideas with classmates. Discussing an answer with a partner serves to maximize participation, focus attention and engage students in comprehending the reading material.

## NEED AND SIGNIFICANCE OF THE STUDY:

The significance of Think-pair-share strategy of study is, for the student to assist other students in the learning process that insists to gain a deeper understanding of the topic by presenting the information in his own terms with their own ideas. Think-pair-share strategy is to promote peer-to-peer interaction and participation. Think-pair-share strategy produces intellectually and socially competent citizens who effectively cooperate with other people and challenge real world problems (Glaser, 1985). When the teacher gives time to share ideas, students take ownership of their information and discuss meaning rather than solely depend on the given teacher's inform.

## Statement of the Problem:

The present study is entitled as “EFFECTIVENESS OF THINK-PAIR-SHARE STRATEGY ON ACHIEVEMENT IN SOCIAL SCIENCE AT SECONDARY LEVEL”.

## 1. Definition of Key Terms:

### Effectiveness:

Effectiveness means having an effect; producing a result or making a striking impression; impressive (Webster's Dictionary, 2009).

**Think:** The teacher provokes students' thinking with a question or prompt or observation. The students should take a few moments (not minutes) just to THINK about the question.

**Pair:** Using designated partners, nearby neighbor, or a desk mate. Students PAIR up to talk about the answer each came up with. They compare their mental or written notes and identify the answers they think are best, most convincing, or most unique.

**Share:** After students talk in pairs for a few moments, the teacher calls for pairs to SHARE their thinking with the rest of the class. The trick here that students don't share what they said, they have to share what their partner said, increasing their listening and retelling skills in the process. The teacher can choose to record these responses or simply listen to what is being.

**Achievement in Social science:** Achievement in social science means the extent to which a student have achieved certain information, demonstrated proficiency in certain skills usually as a result of instruction in the subject of social science. In the present study it represents the scores of the students in the achievement test in social science prepared and validated by the researcher.

**Secondary Level:** Secondary Level refers to any schools imparting instructions to students at the 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup> following Kerala state syllabus.

## OBJECTIVES OF THE STUDY:

1. To compare the pretest scores of the experimental group and the control group
2. To compare the pretest and posttest scores of the experimental group.
3. To compare the pretest and posttest scores of the control group.
4. To compare the posttest scores of the experimental group and the control group.
5. To compare the effectiveness of think-pair-share strategy with existing method.

## HYPOTHESES OF THE STUDY:

1. There is no significant difference between the pretest scores of the experimental group and the control group
2. There is no significant difference between the pretest and posttest scores of experimental group
3. There is no significant difference between the pretest and posttest scores of the control group
4. There is no significant difference between the posttest scores of the experimental group and the control group
5. There is no significant difference between the effectiveness of think-pair-share strategy with existing method

## METHODOLOGY:

The present study is intended to find out the effectiveness of think-pair-share strategy on achievement in Social science at secondary level. Hence this study comes under Quasi - experimental method (Best & Kahn, 2011).

## Population:

In the present study population consist of secondary students in Kerala state.

## Sample:

The investigator selects a sample consisting of 60 Secondary School students. 30 students are considered as experimental group and 30 students are considered as control group.

## Variables of the Study:

In the present study Think-pair-share strategy and Existing method are considered as the independent variables. Achievement in social science will be taken as dependent variable.

**Tools Employed:**

In the present study, the tools used are -

- Lesson transcript based on Think-pair-share strategy
- Lesson transcript based on Existing teaching method
- Achievement test based on Water on Earth

**Statistical Techniques Used:**

- t test - Test of significance of the difference between means.
- ANCOVA - Analysis of co-variance (Garrett,2011).

**Scope of the Study:**

The study is to find out the effectiveness of think-pair-share strategy on teaching Social science at secondary level. It is expected that the findings of students would help the curriculum planners' to make needed changes in the content of social science book by including more interrelated concepts. It will also help teachers to understand the necessity of the application of thinking approach in the teaching of social science.

**Test of Significance of the Difference Between Means (t Test):**

1. Comparison of experimental and control group with regard to pretest scores

**Table 1: Test of Significance of the Difference Between Mean Pretest Scores of Experimental and Control Group.**

Group	N	Mean	SD	df	t	Level of Significance
Experimental	30	9.07	2.84	29	0.81	Not significant at 0.01 level
Control	30	8.17	3.42			

**Test of Tenability of Hypotheses:**

The Hypothesis 1 states that "There is no significant difference between the pre-test scores of the experimental group and control group". The critical ratio 0.81 is not significant at 0.01 levels as evident from the table value. From the table it is found that there is no significant difference between the pretest score of the experimental group and control group. Hence the null hypothesis was accepted.

**Comparison of experimental group with regard to pretest and posttest scores:**

**Table 2: Test of Significance of the Difference Between Means of Pretest and Posttest Scores of Experimental Group.**

Group	N	Mean	SD	Mean difference	t	Level of Significance
Experimental Pretest	30	9.07	2.84	3.06	6.59	significant at 0.01 level
Experimental Posttest	30	12.13	2.65			

**Test of Tenability of Hypotheses:**

The Hypothesis 2 states that "There is no significant difference between the pre-test and posttest scores of the experimental group". From the table it is found that there is significant difference between the pretest and posttest score of the experimental group since the obtained t was 6.59 which was greater than the table value (2.46) at 0.01 level of significance. Hence the null hypothesis was rejected.

**3. Comparison of control group with regard to pretest and posttest scores:**

**Table 3: Test of Significance of the Difference Between Means of Pretest and Posttest Scores of Control Group**

Group	N	Mean	SD	Mean difference	t	Level of Significance
Pretest	30	8.17	3.41	1.33	2.61	significant at 0.01 level
Posttest	30	9.5	3.09			

**Test of Tenability of Hypotheses:**

The Hypothesis 3 states that "There is no significant difference between the pre-test and posttest scores of the control group". From the table it is found that there is significant difference between the pretest and posttest score of the control group since the obtained t was 2.61 which was greater than the table value (2.46) at 0.01 level of significance. Hence the null hypothesis was rejected.

**4. Comparison of experimental and control group with regard to posttest scores:**

**Table 4: Test of Significance of the Difference between Means of Posttest Scores of Experimental and Control Group.**

Group	N	Mean	SD	t	Level of significance
Experimental	30	12.13	2.65	3.55	Significant at 0.01 level
Control	30	9.5	3.09		

**Test of Tenability of Hypotheses:**

The Hypothesis 4 states that "There is no significant difference between the posttest scores of experimental and control group". From the table it is found that the obtained t 3.55 was greater than the table value 2.46 at 0.01 level. There is significant difference between the posttest score of the experimental and control group. Hence the null hypothesis was rejected.

**ANALYSIS OF COVARIANCE:**

**Table 5: Summary of Analysis of Covariance for the Total Pretest and Posttest Scores of the Experimental and the Control Group**

Source of variation	df	SSx	SSy	SSxy	SSyx	MSyx	SDyx
Among Means	1	12.15	104.01	35.59	66.65	66.65	
Within Groups	57	572.03	480.97	319.24	302.81	5.31	2.30
Total	58	584.18	584.18	354.83	369.46	71.96	

$F_{yx} = 12.55$

From table, for df 1/57

F at 0.01 level = 7.08

Since  $F_{yx}$  ratio = 12.55 is greater than the table value, it is significant at 0.01 levels. The significant ratio for the adjusted posttest shows that the final mean scores of the students in the control and experimental group differ significantly after they were adjusted for the difference in the pretest scores. The significant F ratio necessitates proceeding to test the difference separately by t test.

The data and results of adjusted means of posttest scores of experimental and control group is given in Table 6

**Table 6: Data for Adjusted Means of Posttest Scores of Experimental and Control Groups.**

Groups	N	Mx	My	Myx (adjusted)	t
Experimental	30	9.07	12.13	11.88	3.61
Control	30	8.17	9.5	9.75	
General means		17.24	21.63		

The difference in adjusted means for posttest scores of experimental and control groups tested for significance for 1/57 is significant at 0.01 level. Since t obtained is 3.61 which is greater than the table value of t at 0.01 levels (2.66) respectively. This shows that think pair share strategy is better than conventional approach.

**IMPLICATIONS:**

The teachers take initiative and students get acquaintance with this method, the impact could be tremendous, administrators attempt to get the teachers exposed to such innovations they will be in a better position to use such innovations in the class room and make their instruction much more effective.

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